Keracem Eco Prontoplus

Certified, ready-to-use, eco-friendly fibre-reinforced, normal-setting and rapid-drying mineral screed to be covered with adhesives.

Keracem Eco Prontoplus reaches very high levels of mechanical resistances thereby guaranteeing the safe laying of Cementoresina, resin, hardwood, resilient material and ceramic tile floors, including those subject to heavy traffic in commercial and industrial applications.

GREENBUILDING RATING
REF. GBR DATA REPORT 02.23
APPROVED

Rating 5

- ✓ Regional Mineral ≥ 60%
- ✓ Recycled Regional Mineral ≥ 30%
- ✓ CO_2 Emission ≤ 250 g/kg
- ✓ VOC Low Emission
- ✓ Recyclable

1. Ideal for joint-free Cementoresina floors
2. Specifically intended for laying hardwood floors and resilient materials after only 3 days
3. Suitable for laying ceramic tiles, porcelain tiles, and natural stone using adhesives
4. For internal and external use
5. Ready-to-use, ensures constant levels of performance
6. High dimensional stability and long-lasting performance

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Areas of application

→ Intended use:
Screeds with normal setting, rapid drying and specific technology for laying hardwood floors and resilient materials.
Adherent screeds with thickness ≥ 20 mm, floating screeds with thickness ≥ 40 mm.
Maximum thickness 80 mm.

Compatible adhesives:
- gel adhesives, mineral adhesives with SAS technology, single and two-component organic mineral adhesives
- reactive-epoxy and polyurethane, single and two-component cement-based adhesives, dispersed in water or solvent solutions

Covering materials:
- hardwood floors, PVC, linoleum, rubber in civil, industrial and sports applications, textiles and cork
- joint-free Cementoresina floors
- homogeneous tiles, ceramic, porcelain tiles, klinker, cotto, glass and ceramic mosaic, of all types and formats
- natural stone, recomposed materials and marble including those subject to high deformation or rapid staining due to water absorption

Substrates:
- insulation castings and flooring in prefabricated concrete or fresh concrete castings, cement-based screeds, lightened concrete, panels for sound-proofing and thermal isolation

Screeds for internal/external use, in domestic, commercial and industrial applications, also in areas subject to thermal shock and freezing, underfloor heating systems.

Do not use on deformable substrates without having previously calculated the degree of flexure and having provided for the necessary fractionizing joints, in adhesion on concrete castings which have not yet fully cured.

Instructions for use

→ Preparation of substrates
Substrates must be dimensionally stable, dry, free from any rising damp, without cracks, free from dust and loose, crumbling parts and must present a degree of stability suitable for its use. The screed to be covered must be separated from all vertical elements by means of a band of flexible material with a thickness of ≈ 8 – 10 mm, along the entire height of the screed. The structural joints present in the substrate must be created accordingly also in the thickness of the screed.
- Anchored screeds: in the case of irregular substrates with screed thicknesses which are variable or in any case less than 40 mm, it is advisable to prepare the substrate positioning, between the midpoint and lower third of the total thickness of the screed, an electro-welded 50x50-mm mesh of Ø 2 mm, to be anchored to the substrate. To improve adhesion to the substrate, apply a slurry key prepared with 2.5 parts 32.5/42.5 cement, 1 part Keraplast Eco P6 or Keraplast Eco 337 eco-friendly water-based latex and 1 part water, wet-on-wet.
- Floating screeds: when laying water-sensitive flooring or in the case of substrates with a risk of moisture rising or which are not perfectly cured, it is indispensable to create a vapour barrier over the substrate (which should be smooth and free from rough parts) using sheets of polyethylene or PVC. The sheets should be laid overlapping one another by at least 20 cm, sealed with adhesive tape and turned up on the walls and vertical elements such as pillars to a height corresponding with the entire thickness of the screed.
- Screeds on compressible substrates: in the case of lightened, low-density substrates or in the presence of even thin layers of heat and sound-insulating materials, the thickness of the screed and any reinforcements must be calculated according to the deformability class of said materials.

Instructions for use

→ Preparation
Keracem Eco Prontoplus is mixed with clean water using the most common site equipment such as standard concrete mixer, cement mixer trucks, pressure mixers, continuous screw mixers and using the mixing ratio of water/ Keracem Eco Prontoplus indicated until a semi-dry, compact consistency without any appearance of surface water is obtained. When working with temperatures close to 0 °C, protect the bags of Keracem Eco Prontoplus against freezing and use warm water to improve mixing, transportation, pumpability and workability of the mixture. In the case of high temperatures, store the bags of Keracem Eco Prontoplus in the shade and use cold water.
The ideal machine to produce semi-dry consistency screeds such as Keracem Eco Prontoplus is a pressure mixer with pneumatic transportation. With a tank capacity of 260 litres it is possible to insert 13 – 15 25 kg bags of Keracem Eco Prontoplus at each mix. Before closing the mouth, add ≈ 22 – 26 litres of water. With a capacity of 190 litres, insert 10 – 12 bags and ≈ 17 – 20 litres of water.

→ Application
Keracem Eco Prontoplus is applied in a safe, practical way using the traditional methods for cement-based screed: preparation of levelling layers, casting and compacting of the mix, flattening and final smoothing with a float or mechanical means. The compacting phase is of particular importance in order to achieve the highest mechanical performance; it must be carried out immediately after the screed is laid on the substrate, and before the surface is smoothed with a metal flattener. In the case of high thicknesses, compacting must be carried out in successive layers until the required thickness is obtained. Finishing of the screed by damping it with water and using a rotating steel disk, often creates a low-absorption surface crust that tends to lengthen the screed drying time and worsen the performance of the adhesive. At the point where tubing is installed, where the thickness of the screed might be finer (minimum 2 cm), it is necessary to insert a tight-mesh, galvanized metal reinforcement grid (2 – 3 cm). At points in which new layers are to be started following interruptions in work, a connection must be made between the two casting layers by inserting Ø 5 iron bars of length ≈ 50 cm at a distance of ≈ 20 – 30 cm from each other, or using a section of electrowelded mesh (Ø 5 mm, 20x20 cm) and applying a slurry key prepared with 2.5 parts 32.5/42.5 cement, 1 part Keraplast Eco P6 or Keraplast Eco 337 eco-friendly water-based latex and 1 part water on the wall of the casting before continuing work.

→ Cleaning
Residual traces of Keracem Eco Prontoplus can be removed from tools and machinery using water before the product hardens.

Special notes

→ Joints: screed must be desolidarised around the perimeter, laying the Tapetex compressible tape along the whole perimeter of the room, on the walls and on any other vertical elements protruding from the supporting layer.
Creating fractionizing surface joints, cutting the screed while still wet up to a depth that is about 1/3 of the thickness and paying attention not to damage the reinforcement grid, if present. Their location and space distance must be determined at the design stage. They are typically carried out:
- in the case of sudden change in the size of flooring,
- near doors,
- in the presence of elements with loss of continuity,
- for the fractionizing of large continuous surfaces:
35 m² with 6 m maximum individual size, in case of external screeds
50 m² with 8 m maximum individual size, in case of internal screeds (40 m² in case of underfloor heating systems).
Structural joints located in the substrate must be respected.

→ Measurement of humidity: residual humidity can be measured correctly only with a calcium carbide hygrometer. Normal electrical hygrometers are not recommended, as they provide inconsistent and incorrect values due to the special binders used.

→ Underfloor heating systems: initial start-up at least 5 days after laying the screed at a supply temperature of between +20 °C and +25 °C, maintain this for at least 3 days then set the maximum project temperature and maintain it for at least another 4 days. Bring the screed back to room temperature and lay (EN 1264-4 point 4.4).

Certificates and marks

CE EN 13813 · CT C60-F7 EN 13813 · GEV-EMICODE EC 1 PLUS very low emission · RTS EMISSION CLASS FOR BUILDING MATERIAL M1 · ÉMISSIONS DANS L'AIR INTÉRIEUR A+ A B C

* Émission dans l'air intérieur Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

Abstract

The high-performance screed or heat-radiant slab will be made of ready-to-use, eco-friendly, fibre-reinforced, normal-setting and rapid-drying mineral screed, complying with standard EN 13813 class CT–C60–F7, GreenBuilding Rating 5, such as Keracem Eco Prontoplus by Kerakoll Spa, with an average thickness of ____ cm, suitable for adhesive laying of hardwood floors, resilient materials, resin floors after 3 days and of tiles after 24 hrs of application. Including supply and installation of deformable expanded polyethylene bands for desolidarisation joints, fractionizing of the surface into large squares and finishing with a rotating steel disk or float. Average coverage ≈ ____ kg/m² per cm of thickness.

Technical Data compliant with Kerakoll Quality Standard		
Appearance	mixture of binders and aggregates	
Pack	25 kg bags	
Shelf life	≈ 12 months from production in the original sealed packaging, protect from humidity	
Apparent volumetric mass	≈ 1.59 kg/dm³	CSTB 2435
Mineralogical nature of inert material	silicate - crystalline carbonate	
Specific weight of the mixture	≈ 2 kg/dm³	UNI 7121
Grading	≈ 0 – 3 mm	UNI 10111
Mixing water	≈ 1.7 l / 1 x 25 kg bag	
Pot life	≥ 2 hrs	
Temperature range for application	from +5 °C to +35 °C	
Floating screed thicknesses	from 40 mm to 80 mm	
Thicknesses of the bonded screed	from 20 mm to 80 mm	
Foot traffic	≈ 8 hrs	
Waiting time before laying (thickness 5 cm):		
- ceramic tiles	≈ 24 hrs	
- hardwood floors and resilient materials	≈ 3 days	
Coverage	≈ 16 – 18 kg/m² per cm of thickness	

Values taken at +20 °C, 65% R.H. and no ventilation. Data may vary depending on specific conditions at the building site, i.e.temperature, ventilation and absorbency level of the substrate.

Performance		
VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions		
Conformity	EC 1 plus GEV-Emicode	GEV certified 3108/11.01.02
HIGH-TECH		
Resistance to strain parallel to the laying surface	≥ 3.4 N/mm²	UNI 10827
Resistance to:		
- Compressive strength after 3 days	≥ 20 N/mm²	EN 13892-2
- Compressive strength after 28 days	≥ 60 N/mm²	EN 13892-2
- flexural after 28 days	≥ 7 N/mm²	EN 13892-2
Residual moisture (thickness 5 cm):		
- after 24 hrs	≤ 3%	
- after 3 days	≤ 2%	
Thermal conductivity coefficient	1.54 W/(m K)	Inst. Giordano 234318
Conformity	CT – C60 – F7	EN 13813

Values taken at +20 °C, 65% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

Warning

→ Product for professional use
→ abide by any standards and national regulations
→ Do not add other binders, inert materials, additives or pigments to the mixture
→ low temperatures and high relative humidity lengthen the drying time of the screed
→ An excessive quantity of water will reduce strength and the drying time
→ before laying hardwood floors and resilient materials, check residual moisture with a calcium carbide hygrometer
→ do not add water to Keracem Eco Prontoplus during the setting phase
→ do not moisten the screed and protect it from direct sunlight and currents of air for the first 24 hrs
→ if necessary, ask for the safety data sheet
→ for any other issues, contact the Kerakoll Worldwide Global Service - info@kerakoll.ae